

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Ditch #36

Water Body Segment at a Glance:

County:	Dunklin
Nearby Cities:	Kennett
Length of impaired segment:	7 miles
Pollutant:	Low Dissolved Oxygen
Source:	None Given
Water Body ID:	3109



State Map Showing Location of Watershed

Scheduled for TMDL development: 2014

Description of the Problem

Beneficial uses of Ditch #36

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation

Use that is impaired

- Protection of Warm Water Aquatic Life

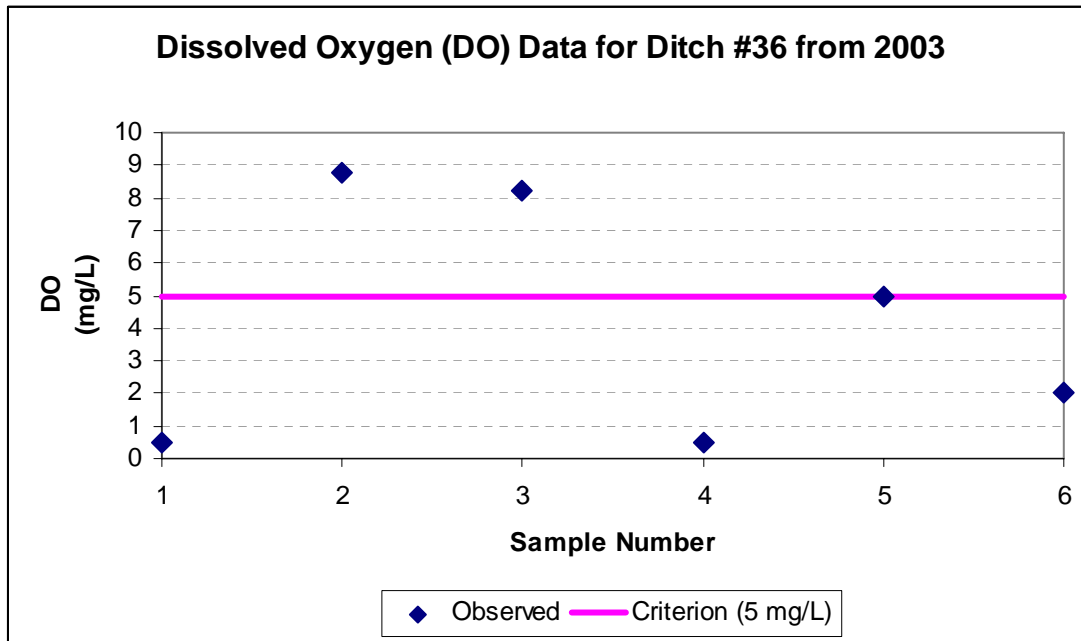
Standards that apply

- In the Missouri Water Quality Standards, found in 10 CSR 20-7.031 Table A, the criterion for dissolved oxygen, or DO, in streams is a minimum of 5 mg/L (milligrams per liter or parts per million).

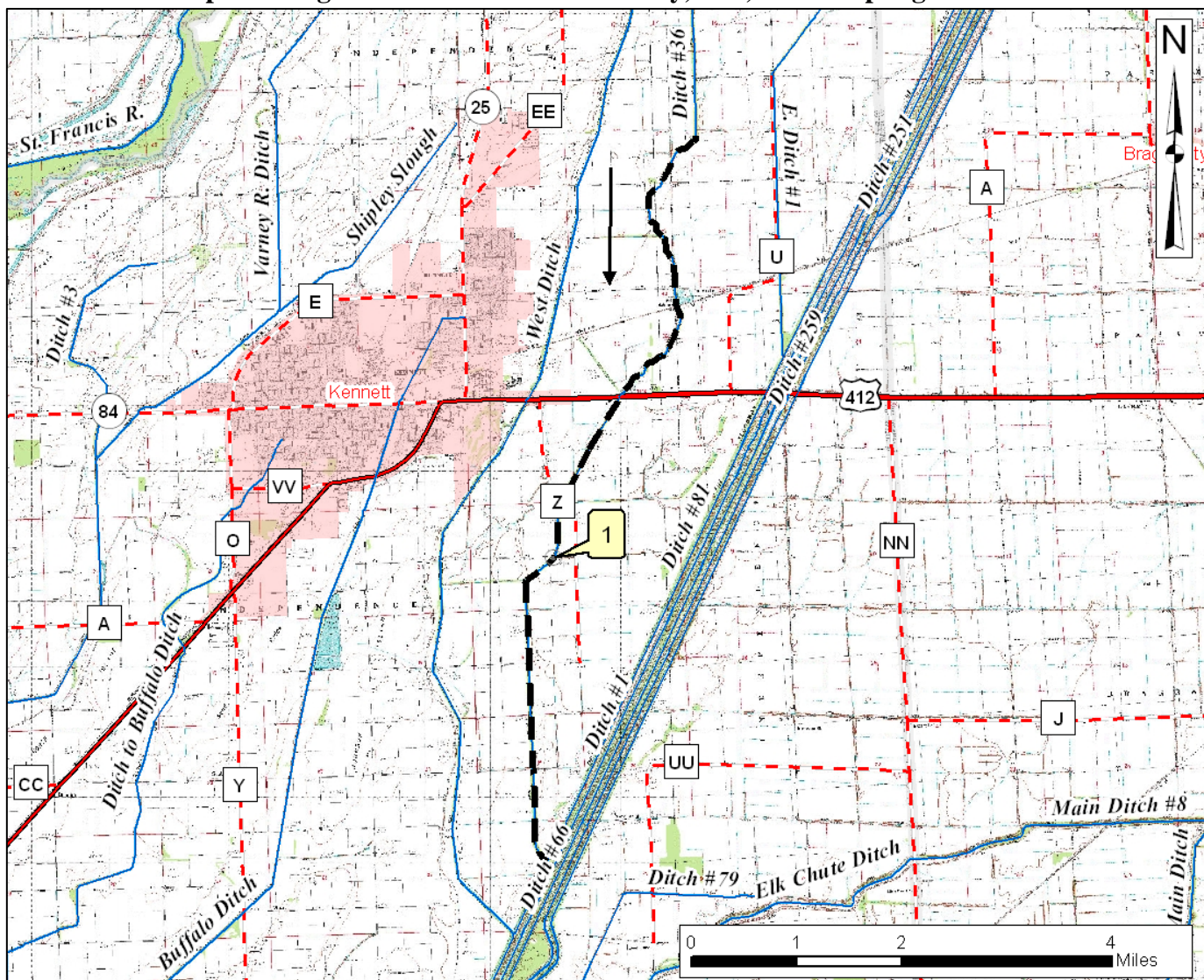
Background information and water quality data

Ditch #36 is in Missouri's bootheel, a low-lying area between the Mississippi and St. Francis rivers. Starting in 1893, the entire landscape was transformed into farmland by logging and constructing an extensive system of drainage ditches and diversion channels. These water bodies have low rates of reaeration (where the water gains oxygen), they experience high water temperatures during the summer and they receive nutrients and sediment from agricultural runoff. All of these things contribute to low oxygen levels.

Dissolved oxygen levels in Ditch #36 do not always meet the water quality criterion of 5 mg/L. Dissolved oxygen is important as many aquatic organisms require high levels of oxygen to survive. For dissolved oxygen, if more that 10 percent of measurements in a water body fail to meet the water quality criterion, that water body is judged to be impaired. In the case of Ditch #36, three of six samples (50 percent) for dissolved oxygen gathered by the department during low flow studies in July and Aug. 2003 did not meet the water quality criterion. Although no source for the low dissolved oxygen impairment is identified on the 2008 303(d) List, it should be noted that the land use in this watershed is almost exclusively row crop agriculture.



Map Showing Ditch #36 in Dunklin County, Mo., and Sampling Site



--- Impaired Segment

→ Direction of flow

Sample Site
1 – Ditch #36 at County Road 502

For more information call or write:

Missouri Department of Natural Resources

Water Protection Program

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